

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-44 (canceled)

Claim 45. (currently amended) ~~The antitumoral composition according to claim 44,~~
An antitumoral composition for the treatment of an HPV related cancerous or precancerous condition comprising at least one recombinant vector, or a viral particle comprising said recombinant vector, said recombinant vector comprising a sequence encoding at least one immunogenic polypeptide encoded by the E6 or E7 early region of a HPV-16 papillomavirus genome, wherein said immunogenic polypeptide is modified by inserting a membrane anchoring sequence and a secretory sequence, so as to have a membrane location at the surface of the cells in which it is expressed, wherein said vector is a non-integrative vector, and wherein said immunogenic polypeptide encoded by the E6 or E7 early region of a HPV-16 papillomavirus genome naturally has a nuclear location and wherein its natural nuclear localization sequence is deleted.

Claim 46. (canceled)

Claim 47. (currently amended) ~~The antitumoral composition according to claim 44,~~
An antitumoral composition for the treatment of an HPV related cancerous or precancerous condition comprising at least one recombinant vector, or a viral particle comprising said

recombinant vector, said recombinant vector comprising a sequence encoding at least one immunogenic polypeptide, wherein said immunogenic polypeptide is modified by inserting a membrane anchoring sequence and a secretory sequence, so as to have a membrane location at the surface of the cells in which it is expressed, and wherein said vector is a non-integrative vector, and wherein said immunogenic polypeptide is a nononcogenic variant of said the polypeptide encoded by the E6 early region of a HPV-16 papillomavirus genome wherein residues 111 to 115 are deleted or said immunogenic polypeptide is a nononcogenic variant of the polypeptide encoded by the E7 early region of a papillomavirus HPV-16 genome wherein residues 21 to 26 are deleted ~~wherein said nononcogenic variant of said E6 polypeptide is a HPV-16 E6 polypeptide wherein residues 111 to 115 are deleted, or wherein said nononcogenic variant of said E7 polypeptide is a HPV-16 E7 polypeptide wherein residues 21 to 26 are deleted.~~

Claim 48. (canceled)

Claim 49. (currently amended) An antitumoral composition for the treatment of an HPV related cancerous or precancerous condition comprising at least one recombinant vector, or a viral particle comprising said recombinant vector, said recombinant vector comprising a sequence encoding:

- (1) an immunogenic polypeptide ~~having~~ comprising a sequence shown in SEQ ID NO: 1,
- (2) an immunogenic polypeptide ~~having~~ comprising a sequence shown in SEQ ID NO: 2, or

(3) an immunogenic polypeptide ~~having~~ comprising a sequence shown in SEQ ID NO: 1 and an immunogenic polypeptide having a sequence shown in SEQ ID NO: 2.

Claim 50-56. (canceled)

Claim 57. (previously presented) A method for the treatment of an HPV related cancerous or precancerous condition in a subject comprising administering an effective amount of the antitumoral composition of claim 47 to said subject to treat said cancer or tumor in said subject.

Claim 58. (currently amended) The method of claim ~~58~~ 57, wherein said subject is diagnosed as having cancer of the cervix, a low-grade cervical dysplasia or a papillomavirus infection.

Claims 59-60. (canceled)

Claim 61. (currently amended) An antitumoral composition for the treatment of an HPV related cancerous or precancerous condition comprising at least one recombinant vector or a recombinant viral particle comprising said recombinant vector, said recombinant vector comprising a sequence encoding:

(1) an immunogenic polypeptide ~~having~~ comprising a sequence shown in SEQ ID NO: 1 and wherein said recombinant vector further comprises a sequence encoding the L1 protein of a papillomavirus and/or the L2 protein of a papillomavirus,

(2) an immunogenic polypeptide ~~having~~ comprising a sequence shown in SEQ ID NO: 2, and wherein said recombinant vector further comprises a sequence encoding the L1 protein of a papillomavirus and/or the L2 protein of a papillomavirus, or

(3) an immunogenic polypeptide ~~having~~ comprising a sequence shown in SEQ ID NO: 1, an immunogenic polypeptide having a sequence shown in SEQ ID NO: 2, and wherein said recombinant vector further comprises a sequence encoding the L1 protein of a papillomavirus and/or the L2 protein of a papillomavirus.

Claim 62. (currently amended) The antitumoral composition according to claim 49, wherein said recombinant vector comprises, in addition, ~~the sequences~~ a sequence encoding at least one ~~compound~~ polypeptide which enhances the antitumoral effect of said composition.

Claim 63. (previously presented) The antitumoral composition according to claim 49, wherein said recombinant vector is derived from a poxvirus.

Claims 64-65. (Canceled)

Claim 66. (currently amended) The antitumoral composition according to claim ~~64~~ 63, wherein said poxvirus is MVA.

Claim 67. (currently amended) The antitumoral composition according to claim ~~63~~ 62, wherein said ~~compound~~ polypeptide which enhances the antitumoral effect is interleukin-2.

Claim 68. (currently amended) A method for the treatment of an HPV related cancerous or precancerous condition in a subject comprising administering an effective amount of the antitumoral composition according to claim-~~62~~ 61 to said subject to treat said cancer or tumor in said subject.

Claim 69. (currently amended) The method of claim-~~69~~ 68, wherein said subject is diagnosed as having cancer of cervix, a low grade cervical dysplasia or a papillomavirus infection.

Claims 70-71. (canceled).

Claim 72. (currently amended) An antitumoral composition for the treatment of an HPV related cancerous or precancerous condition comprising at least one recombinant vector or a recombinant viral particle comprising said recombinant vector, said recombinant vector comprising a sequence encoding at least one immunogenic polypeptide, wherein said recombinant vector is a MVA vector and wherein the sequence encoding at least one immunogenic polypeptide comprises:

a first sequence encoding a nononcogenic variant of the polypeptide encoded by the E6 region of HPV-16, wherein the polypeptide encoded by the E6 region of HPV-16 has residues 111 to 115 deleted and is further modified by insertion of the secretory and membrane anchoring sequences of the measles F protein, and wherein the first sequence is under the control of a vaccinia virus 7.5K promoter; and,

a second sequence encoding a nononcogenic variant of the polypeptide encoded by the E7 region of HPV-16, wherein the polypeptide encoded by the E7 region of HPV-16 has residues 21 to 26 deleted and is further modified by insertion of the secretory and membrane anchoring sequences of the rabies glycoprotein, and wherein the second sequence is under the control of a vaccinia virus 7.5K promoter; and,

the vector further comprising a third sequence encoding human IL-2, wherein the third sequence is under the control of a H5R promoter.

Claim 73. (currently amended) A method for the treatment of an HPV related cancerous or precancerous condition in a subject comprising administering an effective amount of the antitumoral composition of claim-~~73~~ 72 to said subject to treat said cancerous or precancerous condition.

Claim 74. (currently amended) The method of claim-~~74~~ 73 wherein said subject is diagnosed as having cancer of the cervix or a low grade cervical dysplasia.

Claim 75. (currently amended) The method of claim-~~74~~ 73 wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.

Claim 76. (currently amended) The method of claim-~~58~~ 57 wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.

Claim 77. (currently amended) The method of claim-~~69~~ 68 wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.

Claim 78. (canceled)

Claim 79. (currently amended) A method for the treatment of an HPV-related cancerous or precancerous condition in a subject comprising administering an effective amount of the antitumoral composition of claim-~~50~~ 84 to said subject to treat said cancerous or precancerous condition.

Claim 80. (currently amended) The method of claim-~~80~~ 79 wherein said subject is diagnosed as having cancer of the cervix or a low grade cervical dysplasia.

Claim 81. (currently amended) The method of claim-~~80~~ 79 wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.

Claim 82. (New) The antitumoral composition according to claim 47, wherein one or both of said membrane anchoring sequence and said secretory sequence is derived from a protein selected from the group consisting of rabies glycoprotein, HIV virus env glycoprotein, and measles virus F protein.

Claim 83. (New) The antitumoral composition according to claim 47, wherein said recombinant vector or said recombinant viral particle further comprises a sequence encoding at least one polypeptide derived from a lat polypeptide of a papillomavirus.

Claim 84. (New) The antitumoral composition according to claim 47, wherein said recombinant vector or said recombinant viral particle comprises, in addition, the sequence encoding at least one polypeptide which enhances the antitumoral effect of said composition.

Claim 85. (New) The antitumoral composition according to claim 84, wherein said polypeptide enhancing the antitumoral effect is an immunostimulator.

Claim 86. (New) The antitumoral composition according to claim 85, wherein said immunostimulator is selected from the group consisting of interleukin-2, interleukin-7, interleukin-12 and the coadhesion molecules B7.1 and B7.2.

Claim 87. (New) The antitumoral composition according to claim 47, wherein said recombinant vector or said recombinant viral particle is derived from a poxvirus.

Claim 88. (New) The antitumoral composition according to claim 87, wherein said poxvirus is MVA.

Claim 89. (New) The antitumoral composition according to claim 47, containing a pharmaceutically acceptable carrier allowing its administration by injection into humans or into animals.

Claim 90. (New) A method for the treatment of an HPV-related cancerous or precancerous condition in a subject comprising administering an effective amount of the

antitumoral composition according to claim 49 to said subject to treat cancer or tumor in said subject.

Claim 91. (New) The method of claim 90, wherein said subject is diagnosed as having cancer of cervix, a low grade cervical dysplasia or a papillomavirus infection.

Claim 92. (New) The method of claim 90, wherein said antitumoral composition is administered to said subject by an intramuscular or subcutaneous route.

Claim 93. (New) The antitumoral composition according to claim 61, wherein said recombinant vector or said recombinant viral particle is derived from a poxvirus.

Claim 94. (New) The antitumoral composition according to claim 93, wherein said poxvirus is MVA.